

In the Claims

1. (Currently amended) An implantable device for delivering a therapeutic agent into a vessel, the device comprising:

a stent formed from a tubular member, the tubular member having ~~a substantially continuous internal lumen of uniform cross section~~ one or more hollow core sections and a multiplicity of pores providing fluid communication with the lumen between the one or more hollow core sections and the external environment; and

a therapeutic agent dispersed within a bioabsorbable polymer, the bioabsorbable polymer disposed within the lumen contained in the one or more hollow core sections,

wherein the therapeutic agent is configured to be eluted from the lumen one or more hollow core sections into the vessel through the multiplicity of pores after implantation of the stent within the vessel, the bioabsorbable polymer mediating the delivery of the therapeutic agent over an extended period of time.

2. (Currently Amended) The device of claim 1 wherein the lumen extends one or more hollow core sections extend from a proximal end of the tubular member to a distal end of the tubular member.

3. (Withdrawn) The device of claim 1 wherein the tubular member comprises at least one solid section that segregates the lumen into two or more compartments.

4. (Withdrawn) The device of claim 3 wherein a compartment is disposed between a first solid section and a second solid section.

5. (Currently Amended) The device of claim 1 wherein the multiplicity of pores are spaced apart at variable distances with respect to one another.

6. (Currently Amended) The device of claim 1 wherein the multiplicity of pores are disposed circumferentially about an exterior surface of the tubular member.

7. (Original) The device of claim 1 wherein the multiplicity of pores vary in size with respect to one another.

8. (Original) The device of claim 1 wherein the multiplicity of pores vary in shape with respect to one another.

9. (Withdrawn) The device of claim 1 wherein the tubular member comprises a contracted state suitable for insertion into a vessel, and a deployed state in which the tubular member comprises a coil shape configured to contact an inner wall of the vessel.

10. (Withdrawn) The device of claim 9 wherein the tubular member comprises a shape memory material.

11. (Original) The device of claim 1 wherein the tubular member is deformed into a configuration having a plurality of upper peaks and lower peaks, whereby a proximal end

of the tubular member is affixed to a distal end of the tubular member to form a circumferential ring.

12. (Original) The device of claim 11 wherein a plurality of circumferential rings are affixed together.

13. (Withdrawn) The device of claim 1 wherein a plurality of the tubular members are braided to form a mesh.

14. (Withdrawn) The device of claim 13 further comprising at least one solid segment braided together with the plurality of tubular members.

15. (Currently amended) A method for manufacturing a stent for use in a vessel, the method comprising:

providing a tube having a substantially continuous internal lumen of uniform cross section one or more hollow core sections;

forming a multiplicity of pores in a lateral surface of the tube and in, the multiplicity of pores providing fluid communication with the lumen between the one or more hollow core sections and the external environment;

forming a stent from the tube; and

providing a therapeutic agent;

dispersing the therapeutic agent within a bioabsorbable polymer selected to control having a composition that controls elution of the therapeutic agent by biodegrading over a predetermined period of time;

loading the therapeutic agent and biodegradable polymer into the lumen one or more hollow cores sections,

wherein the therapeutic agent is formulated to be retained within the lumen one or more hollow core sections during delivery of the stent and thereafter eluted within the vessel with a rate controlled by biodegradation of the bioabsorbable polymer.

16. (Currently Amended) The method of claim 15 wherein the therapeutic agent is inserted into a proximal opening of the tube in fluid communication with the one or more hollow core sections.

17. (Currently Amended) The method of claim 15 wherein the tube is formed from a shape-memory alloy, and wherein forming a stent from the tube comprises processing the tube to deploy to a coil shape.

18. (Original) The method of claim 15 wherein forming a stent from the tube further comprises:

deforming the tube into a configuration having a plurality of upper peaks and lower peaks;

affixing a proximal end of the tube to a distal end of the tube to form a circumferential ring; and

affixing a plurality of circumferential rings together to form the stent.

19. (Withdrawn) The method of claim 15 wherein forming a stent from the tube comprises braiding a plurality of tubes to form a mesh stent.

20. (Withdrawn) The method of claim 19 further comprising braiding at least one solid wire segment together with the plurality of tubes.

21. (Currently Amended) The method of claim 15 wherein the multiplicity of pores are disposed circumferentially about an exterior surface of the tube.

22. (Currently Amended) The method of claim 15 wherein multiplicity of pores are disposed at variable distances with respect to one another.

23. (Currently amended) A method for delivering a therapeutic agent into a vessel, the method comprising:

providing a stent formed from a tubular member, the tubular member having ~~a substantially continuous internal lumen of uniform cross section~~ one or more hollow core sections with a therapeutic agent dispersed within a bioabsorbable polymer disposed therein and a multiplicity of pores providing fluid communication with the lumen between the one or more hollow core sections and the external environment;

implanting the stent within the vessel; and

eluting the therapeutic agent from the ~~lumen~~ one or more hollow core sections into the vessel through the multiplicity of pores by biodegradation of the bioabsorbable polymer, the bioabsorbable polymer mediating elution of the therapeutic agent over an extended period of time.

24. (Canceled)